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EXAMINER

TRAN, TRANG U

ART UNIT PAPER NUMBER

2614

DATE MAILED: 12/05/2003

34

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/163,977

Applicant(s)

PARK, JU-HA

Examiner

Trang U. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 and 30-36 is/are pending in the application.
- 4a) Of the above claim(s) 30-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Oct. 30, 2003 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

### ***Election/Restrictions***

3. Newly submitted claims 30-36 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-28, drawn to method/apparatus for acquiring program guide, classified in class 348, subclass 731.
- II. Claims 30-36, drawn to method to display program guide, classified in class 725, subclass 39.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are

shown to be separately usable. In the instant case, invention I has separate utility such as acquiring program guide information and does not require the particular such as acquiring program guide information, which is associated with the currently tuned in channel and a first set of the remaining accessible channels found to have priority over a second set of the remaining channels, after a program guide mode is entered and displaying the acquired program guide information for the currently tuned in channel and the first set of remaining accessible channels while program guide information for the second set of remaining accessible channels is acquired in a background operation of Group II for patentability. See MPEP § 806.05(d).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 30-36 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-2 recites the limitation "the preferential channel" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (US Patent No. 6,405,372 B1).

In considering claim 1, Kim et al discloses all the claimed subject matter, note 1) the claimed receiving the program guide information and a program on a currently tuned in channel of the channels, and acquiring the program guide information for the received program received on the preferential channel is met by the 1<sup>st</sup> tuner 100 (Fig. 1, col. 2, lines 42-65), and the claimed comprising acquiring the remaining program guide information for the remaining accessible channels in addition to the currently tuned in channel by scanning the channels except for the currently tuned in channel to acquire the remaining program guide information from other program guide information contained in the channels except for the currently tuned in channel while the program being received is not displayed after a program guide mode is entered, wherein the remaining program guide information is acquired according to a prioritized channel search is met by the microprocessor 116 which is automatically checks sequentially, in step 202, other channels one by one through the second tuner 108, thereby receiving

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EPG information about each channel to update the old EPG information stored and the present invention can also provide a method for checking only the remaining channels for the EPG information except for the current viewing channel (Figs. 1 and 2, col. 2, line 66 to col. 4, line 47).

In considering claim 2, the claimed said acquiring the remaining program guide information for each channel including the channel currently tuned into and the channels except for the currently tuned in channel, comprises obtaining the program guide information of the accessible channels by a tuner while the program received by the tuner is not displayed is met by is met by the microprocessor 116 which is automatically checks sequentially, in step 202, other channels one by one through the second tuner 108, thereby receiving EPG information about each channel to update the old EPG information stored (Figs. 1 and 2, col. 2, line 66 to col. 4, line 47).

Claim 28 is rejected for the same reason as discussed in claim 1.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 5-10, 12-15, 19-23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia (US Patent No. 6,337,719 B1) in view of Kim et al. (US Patent No. 6,405,372 B1).

In considering claim 3, Cuccia discloses all claimed subject matter, note 1) the claimed acquiring program guide information of accessible channels, in response to the program guide command, wherein the program guide information is acquired according to a prioritized or preferential channel search is met by the micro processor 118 (Figs. 1, col. 3, line 55 to col. 4, line 63), 2) the claimed storing the acquired program guide information is met by the digital memory 120 (Fig. 1, col. 3, line 55 to col. 4, line 63), 3) the claimed writing a program list on the basis of the stored program guide information is met by the digital memory 120 (Fig. 1, col. 3, line 55 to col. 4, line 63), 4) the claimed displaying the written program list to the user in response to the program guide command is met by the television screen 108 and the compound EPG (col. 3, lines 55-64 and col. 5, lines 58-65).

However, Cuccia explicitly does not disclose the newly added limitations acquiring program guide information of accessible channels including a channel currently tuned into and remaining channels, being broadcast.

Kim et al teach that under such a state, the microprocessor 116 automatically checks sequentially, in step 202, other channels one by one through the second tuner 108, thereby receiving EPG information about each channel to update the old EPG information stored (Figs. 1 and 2, col. 2, line 66 to col. 4, line 47) and the present invention can also, it is possible that, when needed, only the channels desired by the user are checked for EPG information to be updated (col. 4, lines 24-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate automatically checked for EPG information using the

second tuner as taught by Kim et al into Cuccia's system in order to provide a method for immediately updating the EPG information about all the channels of the digital TV set based on the latest correct EPG information.

In considering claim 5, the claimed further comprising determining whether the program guide information is effective by comparing a current time to an effective period of stored program guide information and proceeding to said writing the program list when the stored program guide information is effective, before said acquiring the program guide information is met by the timer 119 or the flow chart of Fig. 2 (Figs. 1 and 2, col. 4, lines 36-55 and col. 5, lines 20-57) of Cuccia.

In considering claim 6, Cuccia discloses all claimed subject matter, note 1) the claimed writing and displaying a program list including the program guide information of channels tuned before a program guide command is executed from the stored program guide information is met by the television screen 108 and the compound EPG (col. 3, lines 55-64 and col. 5, lines 58-65), 2) the claimed acquiring the program guide information for each channel by searching for the accessible channels in a background operation while the program list is referred to is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode (Fig. 1, col. 4, line 11 to col. 5, line 19) of Cuccia.

In considering claim 7, the claimed said acquiring the program guide information comprises determining the sequence of accessing channels by proximity of channels to the channel tuned before the program guide command is executed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-



by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65) of Cuccia.

In considering claim 8, the claimed said acquiring the program guide information comprises determining the order of priority of channels having the same proximity to the channel tuned before the program guide command is executed according to a channel up/down command input before corresponding channels are accessed is met by the remote control unit 110 and the compound EPG (Fig. 1, col. 5, lines 1-65) of Cuccia.

In considering claim 9, the claimed wherein an upward or downward direction is preferential when no channel up/down command is executed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65) of Cuccia.

In considering claim 10, the claimed said acquiring the program guide information comprises searching channels upward or downward from the channel tuned before the program guide command is executed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65) of Cuccia.

Claim 12 is rejected for the same reason as discussed in claims 3 and 6 and further the claimed rewriting a program list on the basis of the stored program guide information is met by the TV-set updates the EPG information (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65), 5) the claimed displaying the rewritten program

list to a user is met by the television screen 108 and the compound EPG (col. 3, lines 55-64 and col. 5, lines 58-65) of Cuccia.

Claims 13-16 are rejected for the same reason as discussed in claims 7-10, respectively.

In considering claim 19, Cuccia discloses all claimed subject matter, note 1) the claimed a tuner tuning a currently tuned in channel is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode (Fig. 1, col. 4, line 11 to col. 5, line 19), 2) the claimed a program guide information detector detecting program guide information for the currently tuned in channel introduced via said tuner is met by the micro processor 118 (Fig. 1, col. 3, line 55 to col. 4, line 63), 3) the claimed a memory storing the program guide information for each channel detected by said program guide information detector is met by the digital memory 120 (Fig. 1, col. 3, line 55 to col. 4, line 63), 4) the claimed a key input introducing a user manipulation command such as a program guide command or a channel search command is met by the remote control unit 110 and the compound EPG (Fig. 1, col. 5, lines 1-65), 5) the claimed a microprocessor, in response to the manipulation command input via said key input, that writes a program list based on program guide information stored in said memory and searches for accessible channels by controlling said tuner in a background operation while a user refers to the program list is met by the micro processor 118 (Fig. 1, col. 3, line 55 to col. 5, line 19), 6) the claimed a character signal generator generating a character signal corresponding to the program list written by said

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microprocessor and providing the character signal to a screen is met by the television screen 108 and the compound EPG (col. 3, lines 55-64 and col. 5, lines 58-65).

However, Cuccia explicitly does not disclose the claimed a microprocessor searches for remaining accessible channels to obtain program guide information being broadcast for the remaining accessible channels by controlling said tuner in a background operation while a user refers to the program list.

Kim et al teach that under such a state, the microprocessor 116 automatically checks sequentially, in step 202, other channels one by one through the second tuner 108, thereby receiving EPG information about each channel to update the old EPG information stored (Figs. 1 and 2, col. 2, line 66 to col. 4, line 47) and the present invention can also, it is possible that, when needed, only the channels desired by the user are checked for EPG information to be updated (col. 4, lines 24-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate automatically checked for EPG information using the second tuner as taught by Kim et al into Cuccia's system in order to provide a method for immediately updating the EPG information about all the channels of the digital TV set based on the latest correct EPG information.

Claims 20-23 are rejected for the same reason as discussed in claims 7-10, respectively.

In considering claim 27, the claimed wherein said acquiring the program guide information comprises the step of determining the sequence of accessing channels by proximity of the channels to the channel tuned and by a channel up/down command

input just before a channel search is determined is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65) of Cuccia.

10. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US Patent No. 6,405,372 B1) in view of Cuccia (US Patent No. 6,337,719 B1).

In considering claim 26, Kim et al discloses all features of the instant invention as discussed in claim 1 above, except providing the claimed wherein the accessible channels include channels accessed by channels provided by a line input. Cuccia teaches that when the tuner it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate is not used, i.e., the TV set is in stand-by mode or the signal processor 104 is occupied with processing signals from the signal inputs 117 (Fig. 1, col. 4, lines 10-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the line input as taught by Cuccia into Kim et al's system in order to provide a receiving apparatus which provides the user with compound information, composed from information incorporated in multiple signals.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia (US Patent No. 6,337,719 B1) in view of Kim et al. (US Patent No. 6,405,372 B1).

In considering claim 4, the combination of Cuccia and Kim et al discloses all features of the instant invention as discussed in claim 3 above, except providing the claimed a message indicating that the user must wait until the program list is written. However, the capability of displaying message indicated the user must wait until the

program is written is well known and old in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the combination of Cuccia and Kim et al's system with the well known message in order to increase the efficiency system operation in the combination of Cuccia and Kim et al.

12. Claims 11, 16-17, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia (US Patent No. 6,337,719 B1) in view of Kim et al. (US Patent No. 6,405,372 B1) and further in view of Saitoh (US Patent 5,444,499).

In considering claim 11, the combination of Cuccia and Kim et al discloses all the features of the instant invention except for providing further comprising writing a probability distribution of tuned channels, wherein said acquiring the program guide information comprises searching the channels in an order of priority according to a probability distribution of channels. Saitoh teaches that the controller can calculates a probability that channels are to be selected, by accumulating a number of time which the channels are tuned (col. 5, lines 46-62) and searches for the channels in an order of priority according to a probability of tuning by the channels calculated (col. 6, lines 15-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the combination of Cuccia and Kim et al's system with the controller as taught in Saitoh in order to obtain the television guide without carrying out cumbersome tuning operations.

In consider claim 16, the claimed wherein said acquiring the guide information comprises searching channels upward or downward from the channel tuned before the program guide command is executed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65) of Cuccia.

In consider claim 17, the claimed further comprising writing a probability distribution of tuned channels, and wherein the channels are search for in order of priority according to the probability distribution of channels is met by the search of channels base on the priority disclosed in Saitoh, column 6, lines 15-38.

Claim 24 is rejected for the same reason as discussed in claim 11.

13. Claims 18, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia (US Patent No. 6,337,719 B1) in view of Kim et al. (US Patent No. 6,405,372 B1), and further in view of Mugura et al. (US Patent No. 6,243,142 B1).

In consider claim 18, the combination of Cuccia and Kim discloses all the limitations of the instant invention as discussed in claims 3 and 12 above, except for providing the claimed wherein said displaying the written program list comprises displaying a message indicating a status of program guide information in response to the program guide information of a corresponding channel not being stored. Mugura et al teach that the broadcast system generates at least one graphic image to indicate a status of these programs, the status including whether a user has selected pay-per-view broadcasts for purchase. The status also includes whether a broadcast system timer has been set to tune to a particular channel program at a designed time, whether a channel program has been set for recording, etc. (col. 2, lines 20-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the graphic image to indicate a status of programs as taught by Mugura et al into the combination of Cuccia and Kim et al's system in order to provide channel selection guides with many options regarding programs that are available for broadcast.

Claim 25 is rejected for the same reason as discussed in claim 18.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Trang U. Tran** whose telephone number is **(703) 305-0090**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller**, can be reached at **(703) 305-4795**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TT JT  
11/30/03

  
**MICHAEL H. LEE**  
**PRIMARY EXAMINER**